PEG+CAT Content Study:

Report to CPB-PBS *the Ready To Learn Initiative*

Executive Summary

September 2014

EDC Learning transforms lives.

SRI Education

Summary

This study is part of an interrelated series of studies included in the Ready To Learn summative evaluation being conducted by EDC's Center for Children and Technology and SRI Education's Center for Technology in Learning (EDC/SRI). The purpose of this CPB/PBS Ready to Learn Content Study was to explore, in a controlled environment, to what extent children can learn mathematics from *PEG+CAT* outside of instructional environments and relationships, how parents[1] perceived the resources, and how well children are able to engage with these resources independently.

PEG+CAT is a unique transmedia property that emphasizes early mathematics and problem solving. It includes video episodes, online games, and a tablet-based app, all of which allow children and their families to engage with the same characters, settings, and narratives on multiple devices, across various physical and social settings. Researchers identified and chose to include *PEG+CAT* assets focused on patterns and shapes for this study. Resources focused on counting and number relationships also were used to introduce the characters, narratives, and media experiences that would comprise the study experience as these skills are familiar to young children and their families. The curated materials were sequenced to promote learning.

The study included five weekly sessions, each lasting approximately one hour. These sessions occurred in a laboratory setting and were largely unmediated opportunities for children to interact with the transmedia property. Each week children and their parents met with a researcher who administered pre and post assessments and guided *PEG+CAT* viewing and game play. Parents were present throughout the experience and their perspective was included in data collection activities.

The final study sample included 59 children (aged between 4 years, 1 month and 5 years, 5 months) from low-income communities in the New York Metropolitan and San Francisco Bay Areas. The study sample was ethnically diverse: 60% Hispanic/Latino, 25% African American, and 14% Mixed/Other.

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1 "Parents" refers to all primary caregivers, no matter their relationship to the child.

Results indicated that children participating in the CPB/PBS Ready To Learn Content Study showed positive shifts in identifying some geometric shapes and in overall math skills on a standard math learning measure. Parents reported positive impressions of the *PEG+CAT* resources, and also noted that their children engaged in *PEG+CAT* inspired play outside of the study.

This CPB-PBS Ready To Learn Content Study adds to our collection of Ready To Learn studies demonstrating that public media resources, and the transmedia strategy that has been the focus of Ready To Learn these past four years, have the potential to provide children with measurable benefits in the skill domains they seek to target.

Education Development Center, Inc. | Center for Children and Technology

The Center for Children and Technology (CCT) is a unit of Education Development Center, Inc., a nonprofit international research and development organization dedicated to improving the quality, effectiveness, and equity of education throughout the United States and in more than 35 countries. Since 1981, CCT has been at the forefront of creating and researching new ways to foster learning and to improve teaching through the development and thoughtful implementation of new educational technologies. CCT's work is centered in three areas: research, including basic, formative, and program evaluation; design and development of innovative technology prototypes and products; and the implementation and operation of large-scale technology integration efforts.

SRI International | Center for Technology in Learning

SRI International is an independent, nonprofit research institute conducting client-sponsored research and development for government agencies, commercial businesses, foundations, and other organizations. The mission of the Center for Technology in Learning (CTL) is to improve learning and teaching through innovation and inquiry. CTL research and development activities contribute to the knowledge base of effective learning and teaching and embody research insights in the innovative design, use, and assessment of interactive learning environments. In its development, research, and evaluation work, CTL seeks to create tools that lead to better teaching and learning, to develop assessments and conduct evaluations that contribute to the evidence base about the effectiveness and conditions for success of technology-supported innovations, and to inform both the policy and research communities.

Principal Investigators

Shelley Pasnik
sp@edc.org

Carlin Llorente
carlin.llorente@sri.com

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